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SpatiaLite interpretation database

When creating a layer model using interpretation points in GeoScene3D, a database is required to store the points. We have now replaced MS Access with a SpatiaLite database.

SpatiaLite is built on the open-source SQLite database, which is freely available, well-documented, and widely adopted. In addition to general data handling, it natively supports geometry points and other spatial features.

Benefits of SpatiaLite

- **Better GIS integration**: SpatiaLite integrates seamlessly with tools such as QGIS, enabling smoother cross-platform workflows.
- **Open and robust format**: Based on the open SQLite standard, SpatiaLite offers stronger long-term support and fewer technical limitations.
- **Modern technology**: SpatiaLite provides a future-proof foundation well-suited to large datasets and complex projects, including support for geometric elements like lines and polygons.
- **Improved performance and scalability**: With built-in spatial indexing, SpatiaLite delivers significantly faster performance when reading and filtering large geological interpretations. Its scalability supports datasets in the range of 10–100 GB without the file size or network restrictions of MS Access.

Transition Details

From now on, GeoScene3D will only support SpatiaLite as the interpretation database format.

- Database format: https://wiki.geoscene3d.com/geoscene3d:building_a_layered_model:spatialite_database_structure
- Existing projects using MS Access interpretation databases must be upgraded before further interpretation is possible: https://wiki.geoscene3d.com/geoscene3d:building_a_layered_model:upgrading-access-interpretation-database

MS Access is still a valid import format for wells, geophysics, logs, and points.

Performance improvements

- When using profile transparency for 3D grid and ERT the performance is increased.
- Changed the way online sources were checked, to increase source manager performance. Important in project with many sources.

Bug fixes

- Logs imported as ACSII file bugs fixed. Now it works as intended.
- Vector theme not showing in 3D or on profiles has been fixed.
- Map layer manager starting tab has been fixed, so it starts on layers.
- Importing data form GeoCloud bug fixed.
- Better handling of EPSG during upgrading Access to SpatiaLite database.